

INTERNATIONAL SEARCH REPORT

International application No.

PCT/SE 03/01016

A. CLASSIFICATION OF SUBJECT MATTER

IPC7: C12N 15/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: C12N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 9811140 A1 (PHARMACIA & UPJOHN AB), 19 March 1998 (19.03.98), page 14, line 6 - page 11, claims 6, 11 & 12	11-13
A	--	1-10,14-21
X	Journal of Chromatography A, Volume 864, 1999, Josefine Persson et al: "Purification of protein and recycling of polymers in a new aqueous two-phase system using two thermoseparating polymers", page 31 - page 48, figure 4	11-13
A	--	1-10,14-21

 Further documents are listed in the continuation of Box C. See patent family annex.

- * Special categories of cited documents:
- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
12 Sept 2003	16 -09- 2003
Name and mailing address of the ISA/ Swedish Patent Office Box 5055, S-102 42 STOCKHOLM Facsimile No. + 46 8 666 02 86	Authorized officer Terese Persson/EÖ Telephone No. + 46 8 782 25 00

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	International Symposium on Separations for Biotechnology Reading : Separations for biotechnology 3. Cambridge : Royal Society of Chemistry, 1994, Folke Tjerneld et al: "Utilization of Temperature-induced Phase Separation for Purification of Biomolecules", page 505 - page 511 --	1-21
A	Biotechnology and Bioengineering, Volume 78, no. 4, 20 May 2002, S.C. Ribeiro et al: "Isolation of Plasmid DNA from Cell Lysates by Aqueous Two-Phase Systems", page 376 - page 384 -----	1-21

INTERNATIONAL SEARCH REPORTInternational application No.
PCT/SE03/01016**Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.: **11-13 (partially)**
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
see extra sheet

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
 No protest accompanied the payment of additional search fees.

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Claims 11-13 relates to compositions comprising a first and a second polymer each having particular properties, namely, the first polymer should exhibit inverse solubility characteristics below about 60 degrees C, the second should be immiscible in the first. The claims cover all compositions having such polymers, whereas the description supports only a limited number of compositions. It is considered impossible to compare the parameters of the claim with known compositions. These parameters are considered to render the scope of the claim unclear, see PCT art 5 and 6. A meaningful search of the whole claimed scope is impossible. The search has been limited to compositions explicitly used, mainly compositions comprising ethylene oxide and propylene oxide copolymers.

INTERNATIONAL SEARCH REPORT
Information on patent family members

26/07/03

International application No.
PCT/SE 03/01016

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9811140 A1	19/03/98	AU 4142997 A EP 0942935 A JP 2000513945 T SE 9603303 D US 6559284 B	02/04/98 22/09/99 24/10/00 00/00/00 06/05/03